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## **ABSTRACT**

A first embodiment of the invention comprises a method for analyzing seismic data in which a seismic data volume, which includes seismic data sample points, is selected from a subsurface region of interest. A geologic time volume is declared having data storage locations corresponding to the seismic data sample points. Geologic times are obtained corresponding to the seismic data sample points, and the geologic times are stored in the geologic time volume in data storage locations corresponding to the seismic data sample points.